repeatedly bending said single wire with respect to a plurality of amounts of change in strain; and

in said calculation step of an amount of change in strain, a virtual line member, formed by subjecting the respective bending modulus of elasticity of said conductor line and said insulating layer to weighting processes and averaging processes by using ratios of cross-sectional areas, is assumed, and on the assumption that the virtual line member serves as one of said wires, supposing that the bending radius is R_1 in any one of the wires in the furthest bent state at the position that is subjected to the greatest change in bending within an area in which said virtual line member is subjected to bending, that the bending radius is R_2 in the single wire in the furthest extended state, and that the radius of any one of wires that has the greatest difference between said value R_1 and said value R_2 is r, said amount of change in strain ($\Delta \varepsilon$) is calculated by the following equation:

$$\Delta \varepsilon = r \cdot (1/R_1 - 1/R_2).$$

6. (Amended-Clean Text) The method of estimating flexure life of a wire harness according to claim 4,

wherein, in said step of obtaining the correlation, said single wire is repeatedly bent with respect to a plurality of amounts of change in strain to actually measure the number of bending processes up to disconnection so as to obtain the correlation.

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7. (Amended-Clean Text) The method of estimating flexure life of a wire harness according to claim 4,

wherein, said calculation step of the greatest amount of change in strain, supposing that the center conductor line has a radius of r, that the bending radius is R_1 in said center conductor line in the furthest bent state at the position that is subjected to the greatest change in bending within an area in which said center conductor line is subjected to bending, and that the bending radius is R_2 in said center conductor line in the furthest extended state, said greatest amount of change in strain ($\Delta \epsilon$) is calculated by the following equation:

$\Delta \epsilon = r \cdot (1/R_1 - 1/R_2)$.

10. (Amended-Clean Text) The wire harness designing method according to claim 8,

wherein: said application subject design planning step and said wire harness design planning step are executed by an application subject designing station for designing and planning said application subject, and said flexure life estimating step is executed by a wire manufacturing station for manufacturing said wire harness or said application subject designing station.

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11. (Amended-Clean Text) The wire harness designing method according to claim 8, wherein in said extending and bending operation analyzing step in said flexure life estimating step, said change in curvature of the center line of said wire bundle is used as a substitute for said change in curvature of the wire bundle.

12. (Amended-Clean Text) The wire harness designing method according to claim 8,

wherein: in said flexure life estimating step, said life estimation curve represents correlation between the amount of change in strain and said number of bending processes with respect to a single wire that is obtained by actually measuring the number of bending processes up to disconnection by repeatedly bending said single wire with respect to a plurality of amounts of change in strain; and

in said calculation step of an amount of change in strain in said flexure life estimating step, a virtual line member, formed by subjecting the respective bending modulus of elasticity of said conductor line and said insulating layer to weighting processes and averaging processes by using ratios of cross-sectional areas, is assumed, and on the assumption that the virtual line member serves as one of said wires, supposing that the bending radius is R_1 in any one of the wires in the furthest bent state at the position that is subjected to the greatest change in bending within an area in which said virtual line member is subjected to bending,

that the bending radius is R_2 in the single wire in the furthest extended state, and that the radius of any one of wires that has the greatest difference between said value R_1 and said value R_2 is r, said amount of change in strain ($\Delta \varepsilon$) is calculated by the following equation:

$$\Delta \varepsilon = r \cdot (1/R_1 - 1/R_2).$$

13. (Amended-Clean Text) The wire harness designing method according to claim 8, wherein in said initial shape determining step of said flexure life estimating step, the initial shape of said wire harness is determined based upon at least the diameter of said wire harness, the diameter of said wire harness being calculated through a predetermined arithmetic expression based upon the number and diameters of a plurality of kinds of wires constituting the wire harness.

16. (Amended-Clean Text)   The program for allowing a computer to execute the respective steps within the flexure life estimating step in order to realize said flexure life estimating step on the computer in a wire harness designing method disclosed in claim 8.

REMARKS

The Examiner is respectfully requested to enter the foregoing amendment prior to examination of the above-identified patent application to delete multiple dependency.